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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/736,121

12/15/2003

Roger Stone

T02-040A

3625

26683

7590

05/03/2006

THE GATES CORPORATION  
IP LAW DEPT. 10-A3  
1551 WEWATTA STREET  
DENVER, CO 80202

EXAMINER

JOHNSON, VICKY A

ART UNIT

PAPER NUMBER

3682

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/736,121	STONE ET AL.	
	Examiner	Art Unit	
	Vicky A. Johnson	3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                                    |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the pulley journaled to a pivoting lever arm must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "402" and "403" have both been used to designate \*\*\*.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 6, 7, 10-27, 29, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Hayakawa et al (US 4,478,595).

Hayakawa et al disclose a tensioner comprising: an electric actuator (31); a force imparting member (34) engaged with a lever arm (21,25,26,30a); a pulley (20) journaled to the lever arm, the pulley engagable with a belt (2); the force imparting member engaged with the electric actuator whereby the force imparting member is axially moveable by the electric actuator (col. 1 lines 1-15); a load sensor (38) coaxially engaged with the force imparting member, the load sensor detecting and transmitting a

load signal to a controller (col. 4 lines 31-36); and the controller using the load signal to control a force imparting member position (col. 6 lines 2-56).

Re claims 2 and 30, the force imparting member comprises a lead screw; the lead screw rotatably engaged with a threaded collar (col. 7 lines 5-21).

Re claims 3 and 26, the electric actuator comprises an electric motor (col. 4 lines 1-4).

Re claims 4 and 27, the force imparting member is engaged with the electric actuator through a gear transmission (see Fig 3).

Re claims 6 and 29, the lever arm is pivotally engaged with a mounting surface (see Fig 3).

Re claim 7, a system for adjusting a tension of an endless belt comprising: a tensioner (1) having a toroid load sensor (38) and a pulley (20) journaled to a lever arm (21,25,26,30a), the pulley in contact with an endless belt (2) for applying a belt load to the endless belt; the toroid load sensor detecting a belt load and transmitting a belt load signal to a controller (col. 4 lines 31-36); and the controller using the belt load signal to select a pulley position for a belt load (col. 6 lines 2-56).

Re claim 10, a method of controlling a belt load comprising the steps of: engaging a belt (2) with a pulley (20), the pulley journaled to a pivoting lever arm (see Fig 3); positioning the lever arm for a belt load (col. 4 lines 16-36); using a toroid load cell to detect a belt load (col. 4 lines 31-36); selecting a belt load value corresponding to

a desired belt load (col. 6 lines 33-56); comparing the belt load to the belt load value (col. 6 lines 31-36); determining a new lever arm position based upon said belt load value; and moving the lever arm to the new lever arm position to set the belt load to the belt load value (col. 6 lines 33-56).

Re claim 11, detecting an engine parameter (col. 7 lines 22-42); and selecting a belt load value with respect to the engine parameter (col. 8 lines 1-18).

Re claim 12, method of tensioning a belt comprising the steps of: engaging a tensioner (1) having a toroid load sensor (38) with a belt (2); adjusting the tensioner position to impart a belt load to the belt (col. 6 lines 33-56); detecting the belt load with the toroid load sensor; comparing the detected belt load with a desired belt load; and adjusting the tensioner position with a controller until the detected belt load is substantially equal to the desired belt load (cols. 5-7).

Re claim 13, the steps of: selecting the desired belt load with respect to an engine operating parameter (col. 7 lines 22-42).

Re claim 14, the step of: selecting the desired belt load with respect to an engine operating speed (col. 8 lines 1-18).

Re claims 15-18, well known.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5, 8, 9, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayakawa et al (US 4,478,595) in view of Jones et al (GB 2188440).

Hayakawa et al disclose a tensioner as described above, but does not disclose the load sensor coaxially engaged with the force imparting member through the bore.

Jones et al disclose a load sensor coaxially engaged with a member through the bore (page 2 lines 54-62).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the tensioner of Hayakawa et al by replacing the sensor with a load sensor as taught by Jones et al in order to increase accuracy and consistency in the signal.

Re claim 8, Jones et al shows and renders obvious a toroid load sensor coaxially engaged with an axially moveable member (see Fig 2), and Hayakawa et al shows an axially moveable member (34) moveable by an electric actuator (31); the lever arm engaged with the axially moveable member (see Fig 3).

Re claim 9, Hayakawa et al shows the electric actuator further comprises an electric motor, the electric motor engaged with the axially moveable member through a gear reduction transmission (see Fig 3).

Re claim 28, the load sensor comprises a toroid load cell having a bore (see Fig 2).

**Conclusion**


7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

2005/0209034	Ellsworth et al	(toroid sensor)
6,572,501	Winklhofer	(tensioner)
6,849,011	Calfa et al	(tensioner)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vicky A. Johnson whose telephone number is (571) 272-7106. The examiner can normally be reached on Monday-Friday (7:00a-3:30p).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6217. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Vicky A. Johnson  
Primary Examiner  
Art Unit 3682  
4/14/06